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Remarks

Claims 1-3, 5-16 and 28-33 are now in the application. Claims 1-3 and 5-14 remain allowable over the prior art of record.

Claims 15, 16 and 28-31 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroi (6549241) in view of Rao (6253293). Claims 15 and 29 have been amended to conform them with the Examiners "Response to Arguments" on page 4 of the office action and to reinforce the claim language found in the preamble in the body of the claim. The already allowed claims presented such language in the body of the claim (and therefore were afforded patentable weight) and hence the prior art of record was overcome.

The invention as recited in claim 15 (and similarly in method claim 29) includes an encoder with switch logic input automatically sensing a plurality of audio signal encode formats from a plurality of audio channels and redirecting signals from the plurality of audio channels to a plurality of corresponding encoder to process said sensed audio signal formats. The claimed configuration processes multiple audio signals having different encoded formats with the output data uplinked to a satellite. This allows audio channels within a bit stream to be shared by different encode formats. For example, during certain times of the day PCM and alternative language PCM could be transmitted and at other times PCM and AC-3 could be transmitted (p. 9, lines 21-30 and Fig. 4). The switch logic determines which formats are being used and directs the audio signal in each channel to the appropriate encoder.

Hiroi's DTVG system teaches an audio circuit 130 that generates elementary data streams compressed upon the basis of AC3 or HPEG2 specification. Stream combiner 150 processes the elementary audio, video and broadcast data streams to produce a transport stream 161. A multiplexer 160 multiplexers multiple such transports streams 161, 162 and 163 together into an output transport stream 101, which can be conveyed using terrestrial TV, satellite TV or cable TV. But within each transport stream the audio channel is dedicated to the AC3 or HPEG2 format. There is no teaching, suggestion or motivation to allow for even the audio signal to have one of a plurality of encode formats within a given transport stream much less audio signals from a plurality of channels with multiple different audio encode formats as is recited in claims 15 and 29.

Rao teaches an audio decoder that can support decoding of multiple compression formats.

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The decoder receives data in any one of a number of formats through a compressed data input CDI port. An independent digital audio data (DAI) port provides for the input of PCM, S/PDIF, or non-compressed digital audio data. A digital audio output (DAO) port provides for the output of multi-channel decompressed digital audio data. The decoder can transmit data in the S/PDIF format through a transmit port XMT. The Examiner is confusing the DAO and XMT output ports in col. 4, lines 50-58. The six output lines of the DAO port carry uncompressed data for the different channels in a multi-channel format. The XMT is a transmit port that passes through S/PDIF data input at the DAI port, the decoder does not decompress the S/PDIF data but simply transmits it from the DAI port to the XMT port. The decoder does not decode and route the uncompressed audio signals to different output ports (or lines) based on the encode format.

Although Rao's decoder receives data in any one of a number of formats through the CDI port, there is no teaching, suggestion or motivation that those different formats originate from a single encoded signal bit stream. The different formats may be coming from different input sources, different media, multiple bit streams on a media, e.g. Dolby AC-3, DTS and Sony for multi-channel audio, or different broadcast channels. Furthermore, there is certainly no suggestion that audio signals for a plurality of channels having different encode formats are provided in one stream at the CDI port.

New claims 32 and 33 have been added to more particularly claim patentable features of the invention. Specifically, an extractor separates a plurality of AES-3 channels from a signal generated by a source of program content (p. 9, lines 12-20). The switch logic senses the encoded formats for the plurality of AES-3 channels and redirects the audio signal for each AES-3 channel to the corresponding encoder.

Accordingly, the combination of references fails to form a proper ground for a rejection under 35 U.S.C. §103. Applicant requests that the rejection be withdrawn and a notice of allowance issued.

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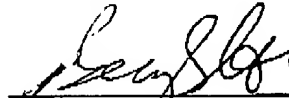
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Conclusion

In view of the foregoing, Applicant respectfully submits that the present application is now in condition for allowance, and such action is respectfully requested.

Applicant believes that there is no fee required for this amendment response; however, in the event that the applicant has overlooked the necessity of a required fee, the Commissioner is authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-0383.

Respectfully submitted,
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